

## CLAIMS

1. A method of fabricating a sheet presenting through pores, the method comprising the following operations:

5 A) preparing a sheet having thickness of 5  $\mu\text{m}$  to a few tens of micrometers, suitable for being etched by a lithographic operation;

10 B) making a mask on a face of the sheet, the mask presenting etching selectivity  $S$  of at least 5, where etching selectivity  $S$  is defined as the ratio of the speed  $V_F$  at which the material of the sheet is etched to the speed  $V_M$  at which the material of the mask is etched;

C) depositing a layer of photosensitive resin on the mask;

15 D) making through holes in the layer of resin by photolithography, matching the configuration of pores to be made;

E) etching through the mask via the pores in the layer of resin; and

20 F) anisotropically etching through the sheet from the pores in the mask in order to make pores in the sheet having an aspect ratio greater than 5, where aspect ratio is defined as the ratio of the depth of the pores to their diameter.

25 2. A method according to claim 1, and which includes cutting the sheet up into individual membranes.

3. A method according to claim 1 or claim 2, in which a sheet is used made of metal.

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4. A method according to any one of claims 1 to 3, in which pores are made in the layer of resin by transferring an image of the configuration of the pores by interference.

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5. A method according to any one of claims 1 to 4, in which said resin also constitutes the mask.

6. A method according to any one of claims 1 to 5, in which at least one of the etching operations is performed in a plasma.

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7. A method according to any one of claims 1 to 6, in which the operations are performed in succession during sequential travel of the sheet.

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8. A method according to any one of claims 1 to 7, the method including an operation of rolling the sheet or a membrane cut out from the sheet into a cylinder and bonding together its edges.

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9. Sheets or membranes with through pores fabricated by a method according to any one of claims 1 to 8.

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10. Filters having calibrated cylindrical through pores of diameter lying in the range one-tenth of a micrometer or less to several tens of micrometers as supplied by a sheet or a membrane according to claim 9.